

ABSTRACT OF THE DISCLOSURE

For the stabilization of the reaction, especially, for maintaining reaction temperature, the feedback control by the feedback unit is performed for to the supply of air (, oxygen, or oxidizing agent), whereas other materials are supplied by the open-loop control according to the instruction of the flow selection unit which indicates a preset value depending on the required hydrogen production volume. In addition, the continuous flow setting unit capable of changing the flow continuously is employed for the supply system of the air, whereas the flow control of the other materials is performed by use of the discrete flow setting units each of which provides the discretized flow by use of the on-off combination of two or more on-off valves.